From the desk of...

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Memo

To: Board of Managers

From: Michael Younes, Director of Municipal Operations MY

CC: Shana Davis-Cook, Village Manager

Date: 5/8/2013

Re: Update on Landscape Maintenance Contract Amendment

During the Board's discussion at your January and February regular meetings regarding the elimination of right-of-way mowing, concerns were raised regarding the Village's landscape maintenance contract – weed control program. At the Board's request, over the past couple months I have been working with the Village's arborist, landscape contractor and representatives from the Energy & Environment Committee to investigate reducing the use of non-organic chemicals and to develop a plan to ensure that the turf in Village's parks and greenspaces is maintained.

Background[1]

Under the Village's current contract, the contractor is responsible for treating/fertilizing Village parks and greenspaces (including the Village Hall grounds) with pre- and post-emergent weed controls each twice (2) during the growing season. There was no treating/fertilization of rights-of-way.

Pre-emergents are applied to prevent the growth of crabgrass and other weedy annual grasses, while post-emergents are applied to control any existing weeds that do grow.

Proposed Plan

After several meetings with the Village's landscape contractor and representatives from the E&E Committee, we agree that the following fertilization program would best fit the Village's needs and virtually eliminate the Village's use of non-organic chemicals.

The proposed plan would consist of four (4) different treatments as follows:

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[1] Copies of all previous memorandums to the Board are attached at the end of this memo. (Att. 1 and 2)

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Spring (April):

Application of 36-0-0 sulfur coated urea at 0.5 lbs N/1,000 sq. ft. This application is a nitrogen based fertilization and is designed to provide extra strength in the spring when the grass comes out of the dominant season and begins to green.

Early Summer (May/June):

Application of 5-4-5 earthworks organic fertilizer at 5 lbs/1,000 sq. ft. This application will help strengthen the soil nutrient table and will increase microbial activity leading into the summer months. By strengthening soil nutrients summer time weeds will have a harder time becoming established and overrunning Village parks and greenspaces.

Late Summer (September):

Application of 36-0-0 sulfur coated urea at 2 lbs N/1,000 sq. ft. along with turf aeration and seeding at 4 lbs/1,000 sq. ft. This application will serve to establish new grass destroyed or damaged during the summer and increase overall turf density.

Fall (October):

Application of 36-0-0 sulfur coated urea at 0.7 lbs N/1,000 sq. ft. This application will build turf strength leading into the dormant season and help the turf recover leading into the following spring.

Because this program is designed to use only naturally occurring materials, during this current growing season there may be an increase in the observed weeds in Village parks & greenspaces as these materials build up in the soil; however, in future growing seasons the overall effectiveness of the program will increase.

The Energy & Environment Committee has endorsed the proposed plan as drafted. A copy of their e-mail is attached to this memo (Att. 4).

Contract Terms

The Village's landscape maintenance contract allots for a total of $870 for fertilization/chemical use as part of the overall landscape maintenance contract (i.e., mowing, weeding and spring/fall clean-ups). The above-outlined proposed plan will increase the annual contract cost, because this program involves additional treatments and some organic fertilizers. The new contract cost would be $2,932 per year, an increase of $2,062.

Board Action

If the Board concurs with the proposed plan, staff requests the Board approve the recommended fertilization plan and to modify/increase the Village's existing landscape maintenance contract with Complete Landscaping in the amount of $2,062 per year.

> **Draft Motion**: I *move to **APPROVE/DENY** staff's recommended fertilization plan for Village parks and greenspaces and [IF APPROVED] authorize the Village Manager to modify/increase the existing landscape maintenance contract with Complete Landscaping in the amount of $2,062 per year.*

Attachments:

(1) Landscape Maintenance Contract – Chemical Use Program Memo dated February 5, 2013
(2) Landscape Maintenance Contract – Chemical Use Program Memo dated March 6, 2013
(3) Memo Supplement: Landscape Maintenance Contract – Chemical Use Program Memo dated March 18, 2013
(4) E-mail from E&E Committee co-Chair Dr. Marilyn Bracken providing support for proposed fertilization plan

Attachment 1

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Memo

To: Board of Managers

From: Michael Younes, Director of Municipal Operations

CC: Shana Davis-Cook, Village Manager

Date: 2/5/13

Re: Landscape Maintenance Contract – Chemical Use Program

During the Board's discussion at your January regular meeting regarding the elimination of right-of-way mowing throughout the Village, a resident voiced concerns regarding the Village's landscape maintenance – chemical use program. In response, the Board asked staff to provide additional information regarding this program at your next meeting. Below please find a summary of the Village contractor's use of chemicals as part of our landscape maintenance contract.

Background

The Village's landscape maintenance contract states that the contractor is responsible for treating/fertilizing Village Parks and Greenspaces (including the Village Hall grounds) with pre- and post-emergent weed controls each twice (2) during the growing season. There is no treating/fertilization of rights-of-way.

Pre-emergents are applied to prevent the growth of crabgrass and other weedy annual grasses, while post-emergents are applied to control any existing weeds that do grow.

The Village's contract states that:

i. The application of all pesticides shall adhere to all federal, state and local laws and regulations. Pesticides shall be applied according to the methods, rates and precautions described on the manufacturer's label.

ii. Spraying shall not be performed when the vegetation is wet, when it appears that rain is imminent within six (6) hours, or when the wind is blowing enough to scatter paper trash, or when human activity is not at a minimum.

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iii. Any person applying pesticides on site must have a valid Maryland Commercial Pesticide Applicator Certificate/License appropriate for the product being applied.

iv. Individual pesticide applicators are solely responsible for properly storing and securing the pesticides they apply. Material safety data sheets (MSDS) and product label information shall be submitted to the Village prior to pesticide applications.

Chemicals/Fertilizers Used

- *Pre-Emergent:*
    - Chemical Name: Lesco Stonewall Pre-emergence Herbicide plus Fertilizer
    - Application Form: Applied in granular form by a material spreader.
    - When Last Applied: April 7 and April 13, 2012.
    - A copy of the material safety data sheet is attached.

- *Post-Emergent:*
    - Chemical Name: Lesco Three-Way Selective Herbicide
    - Application Form: Applied in liquid form by a chemical sprayer.
    - When Last Applied: June 5, 2012 and October 18, 2012.
    - A copy of the material safety data sheet is attached.

- *Aeration and Seeding:*
    - Grass Seed type: Tall Fescue
    - Application Form: Applied in solid form by a material sprayer.
    - When Last Applied: October 18, 2012.

Board Action

This memorandum has been provided as an informational item. At this time there is no action required unless the Board feels that the Village should eliminate or modify the Landscape Maintenance Contract – Chemical Use Program.

Attachments

(1) Material Safety Data Sheet for Pre-emergent treatments
(2) Material Safety Data Sheet for Post-emergent treatments

LESCO®

MATERIAL SAFETY DATA SHEET #4309

1301 East 9th Street, Suite 1300, Cleveland, OH 44114-1849
EMERGENCY PHONE: LESCO: (800) 321-5325
CHEMTREC: (800) 424-9300

DATE ISSUED: 12/8/09
SUPERSEDES: 11/24/09

I. PRODUCT IDENTIFICATION

PRODUCT NAME: LESCO Stonewall® Pre-emergence Herbicide plus Fertilizer; LESCO Stonewall® (0.20%, 0.29%, 0.43%, 0.68%, 2.0%) Plus Fertilizer; LESCO Barricade® (0.20%, 0.29%, 0.43%, 0.68%, 2.0%) Plus Fertilizer; LESCO Barricade® 0.28% Plus Fertilizer; LESCO Barricade® 0.38% Plus Fertilizer
Chemical Family: Dinitroaniline Herbicide
Chemical Name/Synonyms: N3,N3-Di-n-propyl-2,4-dinitro-6-(trifluoromethyl)-m-phenylenediamine

II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%(by/wt.)	CAS #	PEL/TLV
Prodiamine	0.20% – 2.0%	29091-21-2	Not Established
Formulated with one or more of the following ingredients. Check specific product label.			
Urea	0 – 98	57-13-6	10 mg/M^3 (dust) 5 mg/M^3 (resp)
Potassium Chloride	0 – 95	7447-40-7	10 mg/M^3
Potassium Sulfate	0 – 95	7778-80-5	10 mg/M^3
Monoammonium Phosphate	0 – 95	7722-76-1	15 mg/M^3 (dust) 5 mg/M^3 TLV
Diammonium Phosphate	0 – 95	7783-28-0	15 mg/M^3 (dust) 5 mg/M^3 (resp)
Ammonium Sulfate	0 – 95	7783-20-2	15 mg/M^3 (dust)
Calcium Carbonate	0 – 95	1317-65-3	15 mg/M^3 (dust) 5 mg/M^3 (resp)
Sulfur	0 – 20	7704-34-9	5 ppm (SO_2)
Iron Oxide	0 – 10	1309-37-1	15 mg/M^3 (dust)
Iron Sulfate	0 – 10	7720-78-7	15 mg/M^3 (dust)
Manganese Oxide	0 – 10	1317-35-7	15 mg/M^3 (dust)
Magnesium Sulfate	0 – 10	7487-88-9	15 mg/M^3 (dust)
Urea Formaldehyde	0 – 10	9011-05-6	Not Established
Sulfate of Potash-Magnesia	0 – 10	14977-37-8	Not Established
Magnesium Carbonate	0 – 10	39409-82-0	Not Established
Biosolids	0 – 10	Not Established	Not Established
Kaolin Clay	0 – 10	Not Established	15 mg/M^3 (dust) 5 mg/M^3 (resp)
Sodium Sulfite	0 – <1	Not Established	Not Established

TLV of all chemicals and mixtures is 15 mg/M^3; TWA is 10 mg/M^3; Respirable dust TLV of 5mg/M^3, unless otherwise indicated

III. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Primary Route(s) of Entry: Eyes, Skin, Inhalation, Ingestion
POTENTIAL HEALTH EFFECTS: May cause mild irritation to skin and eyes. Ingestion of large amounts may cause gastrointestinal disorder, nausea, vomiting and/or diarrhea.
EYE: May cause mild irritation
SKIN: Prolonged or frequently repeated skin contact may cause allergic reactions to some individuals.
INHALATION: Dust may be irritating to nose, respiratory tract and throat
INGESTION: Ingestion may result in rapid onset of abdominal pain, nausea, diarrhea, blurred vision, sweating, salivation, muscle twitching, and tremors.
MEDICAL CONDITIONS AGGRAVATED: Pre-existing respiratory, skin, or eye conditions

POTENTIAL ENVIRONMENTAL HAZARDS: This product has low solubility in water. At the limits of solubility, this product is not toxic to fish. However, at concentrations above the level of water solubility, it may be toxic to fish. Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to aquatic organisms in adjacent sites. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

IV. FIRST AID MEASURES

EYES: Flush with large amounts of water. Eyelids should be held away from the eyeball to ensure thorough rinsing. Get medical attention if irritation persists.
SKIN: Remove contaminated clothing. Wash area of contact thoroughly with soap and water. Get medical attention if irritation persists.
INHALATION: If symptoms develop, remove person from source of exposure to fresh air. If breathing is difficult, administer oxygen if available. Get medical attention if irritation persists.
INGESTION: Give 1 or 2 glasses of water. Induce vomiting by touching back of throat with finger. Do not give anything by mouth to an unconscious person. Seek medical attention.
NOTES TO MEDICAL DOCTOR: Treat symptomatically

V. FIRE FIGHTING MEASURES

Flash Point (Method Used): Not Applicable

Auto Ignition Temperature: Not Applicable

Lower Explosion Limits: Not Applicable

Upper Explosion Limits: Not Applicable

NFPA/HMIS Rating: Health: 2 Fire: 1 Reactivity: 0

EXTINGUISHING MEDIA:

[x]	Foam	[ ]	Alcohol Foam	[x]	Dry Chemical
[x]	Water Spray	[x]	Use media suitable for surrounding fire	[x]	CO_2

EXPLOSION HAZARDS: Dispersion of fine dust in the air may form an explosive mixture.
FIRE FIGHTING PROCEDURES: Wear NIOSH approved positive pressure, self-contained breathing apparatus. Do not breathe fumes. Remove from area of fire at first opportunity. Prevent water runoff from entering drains, sewers or water sources. Fertilizer will become slippery when wet Guard against falls.
HAZARDOUS COMBUSTION PRODUCTS: If heated to decomposition, will give off toxic fumes of ammonia and formaldehyde. Under fire conditions, urea may decompose to cyanuric acid, biuret or ammonia. Thermal decomposition product may also include, but are not limited to, oxides of nitrogen, hydrogen fluoride and carbon monoxide

VI. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: If material is spilled, sweep up, keeping dust to a minimum and store for re-use. Contaminated product and/or environmental media should be recovered and disposed of properly. Avoid breathing the dust.

VII. HANDLING AND STORAGE

GENERAL PROCEDURES: Read product label before handling. Use only as directed on the label. Do not contaminate water, food, or feed by storage or disposal. Store in original container away from other fertilizer, feed, or food stuffs and separated from other pesticides and way from drains, sewers, and water sources. Do not contaminate water source from disposal of equipment washwater. Do not eat, drink, or smoke while handling this product.
OTHER PRECAUTIONS: Keep out of reach of children. Avoid contact with eyes, skin and clothing. Wash thoroughly after using.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust ventilation recommended. Applicators should stand upwind when handling.

PERSONAL PROTECTION EQUIPMENT:
EYES AND FACE: Safety glasses with side shields, goggles, or face shield are required
RESPIRATORY: NIOSH/MSHA approved respiratory protection
GLOVES: PVC gloves recommended
PROTECTIVE CLOTHING: Long-sleeved shirt and long pants, shoes plus socks
WORK HYGENIC PRACTICES: Practice good care and good safety precautions when handling this product.

IX. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: Not Applicable
MELTING POINT: Not Applicable
VAPOR DENSITY (air = 1): Not Applicable
ODOR: Bland odor
APPEARANCE: Multi-colored granules
pH: Not Determined
SPECIFIC GRAVITY: Not Applicable
EVAPORATION RATE: Not Applicable
VAPOR PRESSURE: Not Applicable
SOLUBILITY IN WATER: Partially soluble
PERCENT VOLATILE: Not Applicable
BULK DENSITY (lbs./cu ft): 56 - 60

X. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Oxidizing agents; thermal, mechanical and electrical ignition sources
STABILITY: Stable
POLYMERIZATION: Will not occur
INCOMPATIBLE MATERIALS: Strong acids, alkalis
HAZARDOUS DECOMPOSITION PRODUCTS: If heated to decomposition, may give off ammonia and formaldehyde as well as oxides of sulfur, manganese, magnesium, iron, potassium and phosphorus, nitrogen, carbon, and chlorine. Urea can yield cyanuric acid or biuret upon heating.

XI. TOXICOLOGICAL INFORMATION

EYE EFFECTS: (Rabbit): Mildly Irritating (AI)
SKIN EFFECTS: (Rabbit): Non-irritating (AI)
DERMAL LC_{50}: (Rat): >2000 mg/kg body weight (AI)
ORAL LD_{50}: (Rat): >5000 mg/kg body weight (AI)
INHALATION LC_{50}: (Rat): >1.8 mg/l air – 4 hours (AI)
SENSITIZATION: (Guinea Pig): Sensitizing (AI)
ACUTE EFFECTS FROM OVEREXPOSURE: Eye irritation, possible skin sensitization
CHRONIC EFFECTS FROM OVEREXPOSURE: Prodiamine: (AI)
Reproductive Hazard Potential: Fetal toxicity at high dose levels (rats); developmental and maternal toxicity observed at 1 g/kg/day.
Chronic/Subchronic Toxicity Studies: Liver (alteration and enlargement) and thyroid effects (hormone imbalances) at high dose levels (rats); decreased body weight gains
CARCINOGENICITY: Prodiamine: (AI)
Potential: Benign thyroid tumors (rat). None observed (mouse)
IARC: Sodium Sulfite, Group 3
NTP: Not Listed
OSHA: Not Listed
OTHER: Not Listed

XII. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: No data available for the formulation. The information presented here is for the active ingredient, Prodiamine: (AI)
Stable in sterile water, in the dark at pH 5,7 and 9, but degrades rapidly in the light, in both water (t1/2 = 0.33 hr @ pH 5.5) and soil (t1/2 – 50 hr). Degradation in soil, in the dark is variable under aerobic conditions (t1/2 ~ 57 – 218 d), more rapid under anaerobic conditions (t1/2 ~ 30 d). Immobile in various soils (Koc >9000). Bioaccumulation is high (BCF = 1300X, whole fish).
ECOTOXICOLOGICAL INFORMATION: No data

XIII. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:
Product: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.
Container: Completely empty container into application equipment. Then dispose of empty container in a sanitary landfill, or at an incineration facility, or, if allowed by state and local authorities, by burning locally. If burned, stay out of smoke.

XIV. TRANSPORTATION INFORMATION:

DOT Transportation: Not Regulated
Proper Shipping Name: Not Applicable
Hazard Class: Not Applicable
U.S. Surface Freight Class: Herbicides, NOI
Reportable Quantity (RQ): Not Applicable

ID NO.: Not Applicable
Marine Pollution #1: Not Applicable
HM 181 Shipping Name: Not Regulated

XV. REGULATORY INFORMATION – UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

_Y_ **Immediate (Acute Health)**
_N_ **Delayed (Chronic Health)**
_N_ **Fire**
_N_ **Sudden Release of Pressure**
_N_ **Reactivity**

SEC 302: Not Applicable
SEC 304: Not Applicable
SEC 313: Not Applicable
CERCLA RQ: Iron Sulfate (7720-78-7) 1,000
CAA RQ: Not Applicable

EPA Registration No.: 10404-88 (0.20%); 10404-89 (0.43%); 10404-90 (0.68%); 10404-91 (2.0%); 60063-28-10404 (0.29%); 100-1338-10404 (0.28%); 100-1339-10404 (0.38%)

Preparation and distribution of this Material Safety Data Sheet is done for LESCO, Inc., pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

The information contained herein is based on available data. However, no warranty is expressed or implied regarding the accuracy of this data or the results to be obtained from the use thereof; and you should make your investigation to determine safety for the use you contemplate. LESCO makes no warranty of merchantability of fitness for a particular use, nor is there any other express or implied warranty except as may be specifically provided otherwise on product.

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For further information, contact: LESCO, Inc. • 1301 East 9th Street, Suite 1300 • Cleveland, OH 44114-1849 or (800) 321-5325.

LESCO®

MATERIAL SAFETY DATA SHEET #4048-0

1385 East 36th Street, Cleveland, OH 44114-4114
EMERGENCY PHONE: LESCO: (800) 321-5325
CHEMTREC: (800) 424-9300

DATE ISSUED: 4/26/11
SUPERSEDES: NEW

I. PRODUCT IDENTIFICATION

PRODUCT NAME: LESCO Three-Way Selective Herbicide
Chemical Family: Mixture
Chemical Name/Synonyms: Mixture of 2,4-D, Mecoprop-p (MCPP-p) and Dicamba

II. COMPOSITION/INFORMATION ON INGREDIENTS

CHEMICAL NAME	%(by/wt.)	CAS #	PEL/TLV
Dimethylamine Salt of 2,4-Dichlorophenoxyacetic Acid	30.56	2008-39-1	10 mg/m^3 (based on adopted limit for 2,4-D)
Dimethylamine Salt of (+)-R-2-(2-Methyl-4-Chlorophenoxy) propionic acid	8.17	66423-09-4	NE
Dimethylamine Salt of Dicamba (3,6-Dichloro-o-anisic Acid)	2.77	2300-66-5	NE
Inert Ingredients	58.50	NA	NE

Substances not 'Hazardous' per OSHA Hazard Communication Standard (29 CFR 1910.1200) may be listed. Where proprietary ingredient shows, the identify may be made available as provided in this standard

III. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: Primary Route(s) of Entry: Eyes, Skin, Inhalation, Ingestion
POTENTIAL HEALTH EFFECTS: Corrosive. Causes irreversible eye damage. Harmful if swallowed or inhaled.
EYE: Causes irreversible eye damage. Vapors and mist can cause irritation.
SKIN: Slightly toxic and slightly irritating based on toxicity studies. Overexposure by skin absorption may cause symptoms similar to those for ingestion.
INHALATION: Harmful if inhaled. Overexposure may cause upper respiratory tract irritation and symptoms similar to those from ingestion.
INGESTION: Harmful if swallowed. May cause nausea, vomiting, abdominal pain, decreased blood pressure, muscle weakness, muscle spasms.
MEDICAL CONDITIONS AGGRAVATED: Inhalation of product may aggravate existing chronic respiratory problems such as asthma, emphysema or bronchitis. Skin contact may aggravate existing skin disease.
POTENTIAL ENVIRONMENTAL HAZARDS: This product is toxic to aquatic invertebrates. Drift or runoff may adversely affect aquatic invertebrates and non-target plants.

IV. FIRST AID MEASURES

EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minute. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Calla poison control center or doctor for treatment advice.
INHALATION: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible Call a poison control center or doctor for further treatment advice.
INGESTION: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

V. FIRE FIGHTING MEASURES

Flash Point (Method Used): NA

Auto Ignition Temperature: ND

Lower Explosion Limits: ND **Upper Explosion Limits:** NA

NFPA/HMIS Rating: **Health:** 3 **Fire:** 1 **Reactivity:** 0

EXTINGUISHING MEDIA:

Large Fires:

_X_Foam __Alcohol Foam __CO_2 __Dry Chemical _X_Water Spray
__Other

Small Fires:

__Foam __Alcohol Foam _X_CO_2 _X_Dry Chemical __Water Spray
__Other

UNUSUAL FIRE AND EXPLOSION HAZARDS: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.
FIRE FIGHTING PROCEDURES: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.
HAZARDOUS COMBUSTION PRODUCTS: (Under firer conditions): May produce gases such as hydrogen chloride and oxides of carbon and nitrogen.

VI. ACCIDENTAL RELEASE MEASURES

RELEASE NOTES: If material is spilled, wear appropriate protective gear for the situation (see Section VIII for Personal Protection information)
Environmental Precautions: This product is toxic to fish and aquatic invertebrates and may adversely affect non-target plants. Do not contaminate water when disposing of equipment wash waters or rinsate. This product has properties and characteristics associated with chemicals detected in groundwater. The use of this product in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination. Most cases of groundwater contamination involving phenoxy herbicides such as 2,4-D and MCPP-p have been associated with mixing/loading and disposal sites. Caution should be exercised when handling these herbicides at such sites to prevent contamination of groundwater supplies. Use of the closed systems for mixing or transferring this pesticide will reduce the probability of spills. Placement of the mixing/loading equipment on an impervious pad to contain spills will help prevent groundwater contamination.
Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.
Methods for Clean-Up and Disposal: Pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup.
Large Spills: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

VII. HANDLING AND STORAGE

GENERAL PROCEDURES:
Handling: Avoid inhalation of spray mists. Do not get in eyes, or on skin or clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal protective Equipment (PPE) immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.
Storage: Always use original container to store pesticides in a secured warehouse or storage building. Store at temperatures above 32°F. If allowed to freeze, remix before using. This does not alter the product. Containers should be opened in well-ventilated areas. Keep container tightly sealed when not in use. Do not stack cardboard cases more than two pallets high. Do not store near open containers of fertilizer, seed or other pesticides. Do not contaminate water, food or feed by storage or disposal.
OTHER PRECAUTIONS: Keep out of reach of children.

VIII. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.
PERSONAL PROTECTION EQUIPMENT:

EYES AND FACE: Face shield, goggles or safety glass with front, brow and temple protection.
RESPIRATORY: Not normally required. If vapors or mists exceed acceptable levels, wear NIOSH approved air-purifying respirator with cartridges/canisters approved for use against pesticides.
GLOVES: Chemical-resistant gloves.
PROTECTIVE CLOTHING: Coveralls over short-sleeved shirt and short pants, chemical-resistant footwear, and socks. For overhead exposure, wear chemical-resistant headgear. Wear a chemical-resistant apron when cleaning equipment, mixing or loading.

WORK HYGIENIC PRACTICES: Do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is store. Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.
COMMENTS: An emergency eyewash or water supply should be readily accessible to the work area.

IX. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: ND
FREEZING POINT: 32°F/0°C
VAPOR DENSITY (air = 1):
ODOR: Slight phenolic odor
APPEARANCE: Clear, dark amber colored liquid
pH: 7 - 8

SPECIFIC GRAVITY: 1.13 @ 20°C
EVAPORATION RATE: ND
VAPOR PRESSURE: ND
SOLUBILITY IN WATER: Soluble
PERCENT VOLATILE: NA

DENSITY (lbs./gallon): 9.4

X. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: Excessive heat. Do not store near heat or flame.
STABILITY: Stable
POLYMERIZATION: Will not occur
INCOMPATIBLE MATERIALS: Strong oxidizing agents: based and acids
HAZARDOUS DECOMPOSITION PRODUCTS: Under fire conditions, may produce gases such as hydrogen chloride and oxides of nitrogen and carbon.

XI. TOXICOLOGICAL INFORMATION

Data from laboratory studies on this product are summarized below:
EYE EFFECTS: (Rabbit): Severely irritating/corrosive
SKIN EFFECTS: (Rabbit): Slightly irritating
DERMAL LD_{50}: (Rabbit): >2,000 mg/kg
ORAL LD_{50}: (Rat, female): 930 mg/kg; (Rat, male): >500 mg/kg
INHALATION LC_{50}: (Rat 4-hr): >3.57 mg/L
SENSITIZATION: (Guinea pig): Not a skin sensitizer
SUBCHRONIC (TARGET ORGAN) EFFECTS FROM OVEREXPOSURE: Repeated overexposure to phenoxy herbicides may cause effects to liver, kidneys, blood chemistry, and gross motor function. Rare cases of peripheral nerve damage have been reported, but extensive animal studies have failed to substantiate these observations, even at high doses in prolonged periods. Repeated overexposure to dicamba may cause liver changes or a decrease in body weight.
CARCINOGENICITY:

IARC: Chlorophenoxy Herbicides = Class 2B
NTP: Not Listed
OSHA: Not Listed
OTHER: Not Listed

XII. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: In laboratory and field studies, 2,4-D DMA salt rapidly dissociated to parent acid in the environment. The typical half-life of the resultant 2,4-D acid ranged from a few days to a few weeks. Mecoprop-p DMA rapidly dissociates to parent mecoprop-p in the environment. In soil, mecoprop-p is microbially degraded with a typical half-life of approximately 11 to 15 days. Dicamba poorly binds to soil particles, is potentially mobile in the soil and highly soluble in water. Aerobic soil metabolism is the main degradative process for dicamba with a typical half-life of 2 weeks. Degradation is slower when low soil moisture limits microbe populations. In water, microbial degradation is the main route of dicamba dissipation. Aquatic hydrolysis, volatilization, absorption to sediments, and bioconcentration are not expected to be significant.

ECOTOXICOLOGICAL INFORMATION:

Data on 2,4-D Dimethylamine Salt:

96-hour LC_{50} Bluegill:	524 mg/l	Bobwhite Quail Oral	500 mg/kg
96-hour LC_{50} Rainbow Trout:	250 mg/l	Mallard Duck 8-day Dietary LC_{50}:	>5,620 ppm
48-hour EC_{50} Daphnia:	184 mg/l		

Data on Mecoprop-p:

96-hour LC_{50} Bluegill:	>100 mg/l (literature)
48-hour EC_{50} Daphnia:	>270 mg/l (literature)
72-hour EC_{50} Green Algae:	>270 mg/l (literature)

Data on Dicamba:

96-hour LC_{50} Bluegill:	135 mg/l	Bobwhite Quail 8-day Dietary LC_{50}:	>10,000 ppm
96-hour LC_{50} Rainbow Trout:	135 mg/l	Mallard Duck 8-day Dietary LC_{50}:	>10,000 ppm
48-hour EC_{50} Daphnia:	110 mg/l		

XIII. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:

Product: Pesticide wastes are toxic. If container is damaged or if pesticide has leaked, contain all spillage. Absorb and clean up all spilled material with granules or sand. Place in a closed, labeled container for proper disposal. Improper disposal of excess pesticide, spray mixtures, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

Container Disposal: Nonrefillable container. Do not reuse or refill containers. Triple rinse container (or equivalent) promptly after emptying.

Nonrefillable container ≤ 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable container > 5 gallons: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

XIV. TRANSPORTATION INFORMATION:

DOT Transportation:
≤ 41 gallons per completed package: Not Regulated
≥ 41 gallons per completed package:
UN 3082, environmentally hazardous substances, liquid, n.o.s.
(2,4-D Salt), 9, III, RQ

Marine Pollutant #1:
NA

XV. REGULATORY INFORMATION – UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT):

SEC 311/312:

Y **Immediate (Acute Health)**
Y **Delayed (Chronic Health)**
N **Fire**
N **Sudden Release of Pressure**
N **Reactivity**

SEC 302 (Extremely Hazardous Substance): NA
SEC 304 (Emergency Release Notification): NA
SEC 313 (Toxic Chemicals):
Acetic Acid, (2,4-Dichlorophenoxy)- (CAS #94-75-7), 25.38% equivalent by weight in product
Dicamba (CAS #1918-00-9), 2.30% equivalent by weight in product
CERCLA RQ:
Acetic Acid, (2,4-Dichlorophenoxy)- (CAS #94-75-7) 100 pounds
Dicamba (CAS #1918-00-9) 1,000 pounds
CAA RQ: NA
RCRA Waste Code:
Acetic Acid, (2,4-Dichlorophenoxy)- (CAS #94-75-7) U240

EPA Registration No.: 10404-43

NOTE: NA=Not Applicable; ND=Not Determined; NE=Not Established

Preparation and distribution of this Material Safety Data Sheet is done for LESCO, Inc., pursuant to the OSHA Hazard Communication Standard (29 CFR 1910.1200).

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For further information, contact: LESCO, Inc. • 1385 East 36th Street, • Cleveland, OH 44114-4114 or (800) 321-5325.

P.O. Box 1584 ♦ Bowie, Maryland 20717 ♦ 301-218-1800 ♦ Fax 301-390-5600

Chevy Chase Village 2013

Organic Turf Program:

1st Application:
Early Spring & Late Spring
(Single Application)

First Application of a corn gluten based product to be applied directly to the turf areas at a rate of 20lbs/1,000 sq.ft. This product and rate of application shall be used as an equivalent replacement of the pre emergent application of an Nitrogen based, non organic product at 2lbs/1000 sq.ft. After direct application, a microbial breakdown of the corn gluten into the turf will begin. This is different from the water soluble, non-organic product used in the past. It will reduce the chance of significant run-off of nitrogen. Once breakdown begins, results shall be in the form of greener turf stand.

Organic Application Price: $3,980.00

2nd Application:
May/June & July/August
(Recommendation of two applications)

Any new broadleaf turf weeds that have germinated shall be controlled with an initial application of a product called Speed Zone. This product is not 100% organic base but should be considered to directly control the new germination of weeds in the turf. Application will be in a spot treatment form vs. a directly "blanket" spraying of turf areas to control broadleaf and turf weeds. The second application would be a product called Drive. Similar in aspect to Speed Zone, it will control those late summer grassy weeds and clover that germinate.

Weed Control Application Price: $425.00 per

3rd Application:
September/October
(Single application)

Applied in combination with aeration & overseeding to provide nutrients to the turf/soil to sustain the health of turf for over winter months while maintaining a rich color. The earthworks 5-4-5 product would be applied directly to the turf areas at a rate of 10lbs/1000 sq. ft. This earthworks product is comprised from a combination of poultry manure, rock phosphate, sulfate of potash, ammonium sulfate, and methylene area. While this product is all natural and can be used with any turf/ornamental application without fear of vegetation burn or salt build up, a side effect would be a slight manure-like odor.

Organic Application Price: $1,535.00

Currently Turf Program Expense:	**$870.00**
Proposed Organic Turf Program Expense:	**$6,365.00**

From the desk of...

Michael Younes, Director of Municipal Operations
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Chevy Chase, MD 20815
Phone (301) 654-7300
Facsimile (301) 907-9721
michael.younes@montgomerycountymd.gov
www.chevychasevillagemd.gov

Attachment 2

Memo

To: Board of Managers

From: Michael Younes, Director of Municipal Operations

CC: Shana Davis-Cook, Village Manager

Date: 3/6/13

Re: Landscape Maintenance Contract – Chemical Use Program

At the Board's February meeting, I reported on the use of chemical turf spraying as part of the Village's annual landscape maintenance contract. Below is a brief synopsis of my February report, a full copy of the report is provided as an attachment (att. 1) to this memo.

Overview

The Village's landscape maintenance contract states that the contractor is responsible for treating/fertilizing Village Parks and Greenspaces (including the Village Hall grounds) with pre- and post-emergent weed controls each twice (2) during the growing season. There is no treating/fertilization of rights-of-way.

Pre-emergents are applied to prevent the growth of crabgrass and other weedy annual grasses, while post-emergents are applied to control any existing weeds that do grow. The Village's contractor uses *Lesco Stonewall Pre-emergence Herbicide plus Fertilizer* as the pre-emergent and *Lesco Three-Way Selective Herbicide* as the post-emergent.

Use of an Organic Chemical Use Program

As a result of the Board's discussion in February, there was sufficient interest to investigate the feasibility of modifying the Village's chemical use program. Accordingly, over the past month the Village's landscape contractor has developed a plan to convert our traditional chemical use program to one that is organic. A copy of the plan is attached to this memo (att. 2). Representatives from the Village's contractor, Complete Landscaping, will be in attendance at the Board's March 18 meeting to provide further insight and answer questions the Board may have about the plan.

CHEVY CHASE VILLAGE
ESTABLISHED 1890

In short, there are two (2) major differences between a traditional and an organic chemical use program:

- Frequency of Chemical Applications:

  Because the chemicals are all natural and are not as potent as traditional chemicals, they must be applied more frequently and in greater quantity to maintain the same level of effectiveness. Additionally, due to the increased quantity of material required there is an increased chance of run-off into the storm drain system.

- Cost:

  The cost to implement an organic chemical use program is almost 7.5 times higher than a traditional chemical program. Currently, the Village pays as part of our overall landscape maintenance $870 per year. If the Village implemented an organic program that cost would grow to $6,365 per year. The increase in cost is directly attributable to the increased frequency of treatments, material costs and quantities.

Board Action

Following Board discussion at the March meeting, staff requests the Board take formal action to modify, maintain or eliminate the Village's current chemical use program. This will ensure staff can and provide direction to the Village's landscape contractor in advance of the first scheduled chemical treatments the beginning of April.

Attachments

(1) Landscape Maintenance Contract – Chemical Use Program Memo dated February 5, 2013
(2) Organic Chemical Use Plan

From the desk of...

Michael Younes, Director of Municipal Operations
5906 Connecticut Avenue
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Phone (301) 654-7300
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michael.younes@montgomerycountymd.gov
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Attachment 3

Memo

To: Board of Managers

From: Michael Younes, Director of Municipal Operations

CC: Shana Davis-Cook, Village Manager

Date: 3/18/2013

Re: Memo Supplement: Landscape Maintenance Contract – Chemical Use Program
(Use of Integrated Pest Management Practices)

Below please find a supplement to my memorandum circulated Thursday afternoon regarding the Village's chemical treatments as part of our landscape maintenance contract.

Use of Integrated Pest Management (IPM) Practices

An IPM is a program designed to provide an effective and environmentally sensitive approach to treating trees, bushes and turf areas. This is achieved by a combination of monitoring and identifying pest issues, prevention and control.

The Village's current contract set up as a quasi- IPM, in that that prevention or "pre-emergent" is applied as a blanket treatment to all Village park areas instead of as needed. The control or "post-emergent" is applied as and where needed to combat weed growth.

The Village's contractor can use traditional IPM practices by removing the blanket "pre-emergent" treatment; however the contractor cautions that this may cause an increase in weed growth late in the growing season and could cause the "post-emergent" application to be used more widespread.

If the Village opted for a traditional IPM, the contractor anticipates an additional savings of approximately 25%. It is possible to implement a traditional IPM in the framework of an organic or traditional chemical use program.

CHEVY CHASE VILLAGE
ESTABLISHED 1890

Attachment 4

Younes, Michael

From: Marilyn Bracken [marbracken@msn.com]
Sent: Tuesday, April 09, 2013 7:21 PM
To: Younes, Michael
Cc: cfmonkjr@aol.com; Marea Hatziolos
Subject: Re: Village Fertilization Program

Importance: High

Michael,
Thank you for the opportunity to review the revised proposal. The treatment program is a good plan. The E&E Committee appreciates your efforts in working to provide a environmentally responsible park maintenance program. We appreciate Dr. Feather's guidance as well.

Regards, Marilyn Bracken

On Apr 9, 2013, at 12:01 PM, Younes, Michael wrote:

Dr. Bracken,

In follow-up to our meeting a couple weeks ago with the Village's landscape contractor, below please find their proposal to fertilize Village parks to limit weed growth. Dr. Tolbert Feather has reviewed the proposal and agrees with what is recommended.

(April) 36-0-0 sulfur coated urea at 0.5 lbs N/1000 sq ft; provides spring green up.

(May/June) 5-4-5 earthworks organic fertilizer at 5 lbs/1000 sq ft; strengthens the soil nutrient table and increases microbial activity leading into the summer.

(September) 36-0-0 sulfur coated urea at 2'bs/1000 sq ft and aeration and seeding at 4lbs/1000 sq ft; establishes new grass and increase turf density.

(October) 36-0-0 sulfur coated urea at 0.7 lbs N/1000 sq ft; builds turf strength leading into dormancy and helps break dormancy leading into the spring.

As you can see the proposal contains no pre- or post- emergent chemicals. Dr. Feather and I feel that this program is an appropriate balance to ensure the grass in Village parks is maintained. Without any treatments Dr. Feather and the Village's contractor agree that grass in Village parks will most likely be overrun by weeds and thereby causing greater expense in the future to revive the grass.

Can you please review and provide your comments on the above treatment program at your earliest convenience, in order to be effective the Contractor must apply the first treatment within the next 2 weeks.

Thanks,

Michael

<image001.jpg>

Michael W. Younes
Director of Municipal Operations